

WHAT IS CLAIMED:

1. A method of fabricating a stent for implantation within a body lumen, comprising the steps of:

disposing a first cladding tube about a substrate tube, wherein the first
5 cladding tube includes a metal;

joining the first cladding tube to an outside surface of the substrate tube to form a laminate tube; and

forming a stent pattern in the laminate tube.

10 2. The method of fabricating a stent according to claim 1, wherein the substrate tube includes a metal selected from the group consisting of stainless steel, nickel-cobalt-chromium-molybdenum alloy, or chonichrome; and the first cladding tube comprising a radiopaque metal.

15 3. The method of claim 2, wherein the first cladding tube comprises a metal selected from the group consisting of platinum, gold, tantalum, tungsten, platinum-iridium, and palladium.

4. The method of fabricating a stent according to claim 1, wherein the
20 method further comprises:

disposing a second cladding tube about the first cladding tube, wherein the second cladding tube comprises a radiopaque metal; and

joining the second cladding tube to the first cladding tube.

5. The method of claim 4, wherein the second cladding tube comprises a metal selected from the group consisting of platinum, gold, tantalum, tungsten, platinum-iridium and palladium.

5 6. The method of fabricating a stent according to claim 1, wherein joining the first cladding tube further comprises cold drawing the laminate tube.

7. The method of fabricating a stent according to claim 1, wherein joining the first cladding tube further comprises heat treating the laminate tube.

8. The method of fabricating a stent according to claim 1, wherein
10 joining the first cladding tube further comprises cold drawing the laminate tube to bond the first cladding tube to the substrate tube.

9. The method of fabricating a stent according to claim 1, wherein joining the first cladding tube to the substrate tube further comprises passing the laminate tube through a series of dies to reduce an outside diameter of the laminate
15 tube by about 25 percent.

10. The method of fabricating a stent according to claim 1, wherein an inside diameter of the first cladding tube has an interference fit with the outside surface of the substrate tube.

11. The method of fabricating a stent according to claim 1, wherein forming the stent pattern further comprises chemically etching the laminate tube.

12. The method of fabricating a stent according to claim 1, wherein forming the stent pattern further comprises laser cutting the laminate tube.

5 13. The method of fabricating a stent according to claim 1, wherein the method further comprises heat treating the laminate tube prior to forming the stent pattern therein.

14. The method of fabricating a stent according to claim 1, wherein the method further comprises cold working the laminate tube.

10 15. The method of fabricating a stent according to claim 1, wherein the substrate tube is made of stainless steel and the first cladding tube is made of NiTi alloy.

16. The method of fabricating a stent according to claim 1, wherein the first cladding tube has a wall thickness that is less than a wall thickness of the
15 substrate tube.

17. A method of fabricating a stent for implantation within a body lumen, comprising:

disposing a first cladding tube about a substrate tube comprised of a superelastic alloy;

joining the first cladding tube to the substrate tube to form a laminate tube;

and

5 forming a stent pattern in the laminate tube.

18. The method of claim 17, wherein there is an interference fit between an outside diameter of the substrate tube and an inside diameter of the first cladding tube prior to joining the tubes.

20. The method of claim 17, wherein the first cladding tube is comprised
10 of a radiopaque metal.

21. The method of fabricating a stent according to claim 17, wherein the method further comprises:

disposing a second cladding tube comprising a radiopaque metal about the first cladding tube; and

15 joining the first cladding tube, the second cladding tube, and the substrate tube to form a laminate tube.

22. The method of claim 21, wherein the second cladding tube comprises a metal selected from group consisting of platinum, gold, tantalum, tungsten, platinum-iridium and palladium.

23. The method of claim 21, wherein the first cladding tube is comprised of stainless steel.

24. The method of fabricating a stent according to claim 17, wherein joining the first cladding tube comprises cold drawing and heat treating the first
5 cladding tube and substrate tube to form a laminate tube.

25. The method of fabricating a stent according to claim 24, wherein cold drawing further comprises passing the laminate tube through a series of dies.

26. The method of fabricating a stent according to claim 17, wherein the method further comprises annealing the laminate tube prior to forming the stent
10 pattern therein.

27. A laminate stent for implantation within a body lumen, comprising:
a substrate tube having an exterior;
a metallic cladding bonded under pressure about the exterior of the substrate
tube to form a laminate tube; and
15 a stent pattern formed in the laminate tube.

28. The laminate stent of claim 27, wherein the metallic cladding includes a metal selected from the group consisting of platinum, gold, tantalum, tungsten, platinum-iridium, and palladium.

29. The laminate stent of claim 27, wherein the substrate tube includes a metal selected from the group consisting of stainless steel, nickel-cobalt-chromium-molybdenum alloy and chonichrome.

30. The laminate stent of claim 27, wherein a wall thickness of the
5 cladding is less than a wall thickness of the substrate tube.

31. The laminate stent of claim 27, wherein the metallic cladding is a first metallic cladding about the substrate tube and the laminate tube further comprises a second metallic cladding bonded under pressure to an exterior of the first metallic cladding.

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32. The laminate stent of claim 31, wherein the first metallic cladding comprises a superelastic alloy and the second metallic cladding comprises a radiopaque metal.

33. The laminate stent of claim 32, wherein the superelastic alloy of the
15 first metallic cladding is NiTi.

34. The stent of claim 27, wherein the substrate tube has a coefficient of thermal expansion that is less than a coefficient of thermal expansion of the metallic cladding.

35. The laminate stent of claim 27, wherein the substrate tube is comprised of a superelastic alloy.

36. The laminate stent of claim 35, wherein the substrate tube is comprised of NiTi alloy.

5 37. The laminate stent of claim 36, wherein the first metallic cladding is comprised of stainless steel.

38. The laminate stent of claim 36, wherein the second metallic cladding is comprised of a radiopaque metal.